

EXPERIMENT 34.

Oct. 20. Medium-sized mongrel. Weight, 31 lbs. Shot with a Remington rifle, using a .22 short shell. Ball entered on a level with, and one and a half inches to the right of the umbilicus. Dog was allowed to come from under the anæsthetic and remain so for an hour. Again placed under the anæsthetic and Senn's test applied. Gas soon made its appearance at the wound of entrance and burned in a jet. Animal again returned to the kennel.

Oct. 21. Found dead.

Post-mortem. Abdominal cavity contained about eight ounces of bloody fluid and a large number of clots. Considerable extravasation of feces and entozoa. Five large wounds of the intestines and one of the mesentery involving a vessel. Wound of the splenic border. Death from hæmorrhage.

EXPERIMENT 35.

Oct. 20. Medium-sized mongrel. Weight, 20 lbs. Shot with a flobert from a Remington rifle. Ball entered on a level with and two inches below the umbilicus. Senn's test was applied indicating an intestinal perforation. The gas did not burn in a jet but only now and then the bubbles ignited. Removed, but died in an hour's time.

Post-mortem. Abdominal cavity filled with bloody fluid and clots. There were seven perforating wounds of the intestine and four of the mesentery. Two of the latter involved mesenteric vessels. Death from hæmorrhage.

EXPERIMENT 36.

Nov. 5. Medium-sized mongrel. Weight, 20 lbs. Shot with a S. & W. pistol, .22 calibre. Ball entered on a level with and to the right of the umbilicus, passing in a very shallow course. Given 12 minims Magendie's solution and removed. No shock, the dog rallying at once.

Nov. 6. Up and takes milk.

Nov. 7. Lively and eats freely.

Nov. 8. Same.

Nov. 12. Apparently recovered and made his escape from the hospital. In this experiment the ball apparently did not enter the abdominal cavity, or if it did so, it failed to create any serious damage.

EXPERIMENT 37.

Nov. 12. Small mongrel. Weight, 17 lbs. Shot with a S. & W. pistol, .22 calibre. Given 15 minims Magendie's solution and removed.

Nov. 13. Found dead.

Post-mortem. Cavity contained some blood and nine perforating wounds of the intestines. Death from shock.

EXPERIMENTS UPON SEPARATE ORGANS—RESECTIONS.

EXPERIMENT 38.

Aug. 28. Full-grown bull dog. Weight, 34 lbs. Abdominal cavity opened and a loop of intestine withdrawn. The vessels at the mesenteric border ligated and one

inch resected. The ends were united after the method of Wölfler (uniting the posterior third from within). Uneventful recovery followed.

EXPERIMENT 39.

Aug. 31. Small mongrel. Weight, 14 lbs. Abdominal cavity opened and a loop of intestine withdrawn, resecting four inches as in the previous experiment. Recovery.

EXPERIMENT 40.

Oct. 2. Same dog used that served in the foregoing experiment. Abdomen opened just above the scar from the former operation. The resection was found in a perfect condition with a spontaneous omental graft at the seat of union. The sutures all encysted excepting those introduced posteriorly. Eighteen inches including the former resection were now removed. The vessels were ligated at the vertebral border of the mesentery and a V-shaped piece excised uniting the edges with a running catgut suture. The intestines were united as in the preceding experiments only reinforcing the resection by an "omental graft." The ends were united not far from the ileocaecal valve, and the blood supply very much interfered with; however no harm resulted. Recovery followed without any inconvenience to the animal after the removal of 22 inches of intestine.

Nov. 28. Killed to obtain the specimen.

Post-mortem. Several adhesions at the seat of resection. No narrowing of the calibre. Sutures encysted. The web of the mesentery between the vessels at the resection absent.

EXPERIMENT 41.

Oct. 12. The same subject that served in Experiment 38 was used here. Abdomen opened and the site of the former resection withdrawn and found marked by an omental adhesion and a slight narrowing of the intestine internally and externally. The sutures all encysted and plainly visible. Four inches were resected including the site of the former operation. Very shortly after the operation the dog by mistake was fed upon a large piece of meat, but no harm resulted.

Nov. 5. Killed to obtain the specimen.

Post-Mortem. Omentum adherent. Lumen slightly narrowed. Sutures encysted.

EXPERIMENT 42.

Nov. 19. In this experiment the same dog was used that served in Experiment 24. Laparotomy above the former site. The spleen withdrawn and a triangle excised measuring one inch at its base and a fraction more from base to apex. The edges were united by a continuous suture commencing on its external surface, passing over the free border and down upon its internal surface. This completely arrested the hemorrhage. Following this the spleen increased to almost double its size and became cyanosed in appearance, in which state it was returned and the cavity closed.

Dec. 28. Recovered. Killed to obtain specimen. Complete union marked by a white line which represented the united edges. Omentum adherent. Sutures encysted and somewhat softened. Part below the suture slightly atrophied and darker color, but otherwise unchanged.

EXPERIMENT 43.

Jan. 2. Full-grown mongrel. Weight, 40 lbs. Curvilinear incision under the right border of the ribs, and afterward joined by one in the linea alba. Liver exposed and perforated by a blunt aseptic instrument as well as the excision of a narrow but long triangle. The puncture was sewed upon both sides which arrested the hæmorrhage completely. The excision was united by a running cat-gut suture applied as in the previous experiment, which likewise arrested the flow from the surfaces. In drawing the liver into view rupture of its capsule occurred in several places. Cavity washed out and closed.

Jan. 3. Walking about. Took several ounces of milk in the morning but refused food at noon and evening. Urine loaded with bile.

Feb. 18. Killed to obtain specimen.

Post-mortem. Liver marked by white lines at the points of rupture. Slight scars at the punctures. The excision was marked by an omental adhesion but otherwise unchanged. No evidence of peritonitis.

EXPERIMENT 44.

Jan. 2. Small white mongrel. Weight, 19 lbs. A hypodermic syringe of bile was obtained from another dog and injected into the peritoneal cavity without the introduction of air. This was repeated a second time and each time followed by an exhibition of pain from the dog. The syringe was cautiously introduced, care being observed to try and insure the arrival of the bile in the peritoneal cavity, and from the impression it was apparently successful.

Jan. 3. Refuses all food and lies quiet in one place.

Jan. 4. Same.

Jan. 15. Recovered, and killed for further examination.

Post-mortem. Absolutely no signs were visible of any change having occurred within the peritoneal cavity.

EXPERIMENT 45.

Jan. 29. Liver-colored mongrel. Weight, 32 lbs. Abdomen opened and the intestines exposed. The intestines were insufflated with air until they were distended. The respirations became short and slow. Puncture was made into the large intestine, which was followed by an escape of air and the collapse of the intestine, but only for a short distance beyond. This was repeated in the small intestines with the same result. The stomach, which was likewise distended, was compressed, but no gas escaped till a puncture was made into it. The intestines were largely distended, and the occurrence of acute flexures prevented the ready escape of the air.

Experiment	Profitable	Wounds	Non-perforating	Perforating	Intestine	Remarks							
1	32	•	3	1	o	Kidney. 5	•	+	•	1	•	Death from shock in 6 hours. Wounds covered with thin layer of exudate.	
2	Flo.	•	1	o	1	None.	2	•	+	•	•	Unsuccessful. Death almost immediately from hemorrhage.	
3	Flo.	•	1	o	o	None.	1	+	+	+	1/2	•	Continued suture subsequently found hanging from the site.
4	21	•	12	1	o	None.	13	•	•	•	1 1/2	•	Death in 10 hours from shock. Resected 4 feet intestines.
5	22	•	5	2	o	Spleen.	8	•	•	•	1 1/2	•	Death from shock. Resected 1 inch.
6	22	•	4	1	o	Kidney.	6	•	•	•	1 1/2	•	Death from acute septic peritonitis.
7	22	•	6	o	o	Spleen & Liver.	8	•	•	•	1	•	Wounds of the intestines, liver and spleen
8	22	•	8	o	2	Spleen.	11	•	•	•	1 1/2	•	Extensive adhesions of all the intestines in one mass.
9	Flo.	•	7	o	2	None.	9	•	•	•	1	•	Intestines during operations were in portions contracted and dilated.
10	Flo.	•	5	o	o	Spleen.	6	•	•	•	1 1/2	•	Splenic wound treated with a suture on both sides.
11	Flo.	•	3	o	o	None.	5	•	+	+	1 1/2	•	Subsequent examination revealed circumscribed peritonitis.
12	22	•	6	1	o	None.	7	•	•	•	1	•	Same.
13	22	•	o	1	o	Spleen.	2	•	•	•	+	•	No intestinal perforation.
14	22	•	2	1	1	None.	4	•	•	•	1 1/2	•	No remarks.
15	22	•	9	o	1	Spleen.	11	•	•	•	2	•	Extreme trauma in this experiment.
16	22	•	6	1	o	None.	7	•	•	•	1 1/2	•	Spontaneous omental grafting.
17	Flo.	•	8	2	1	None.	11	•	•	•	1	•	Death from perforative peritonitis.
18	22	•	3	o	o	Spleen.	4	•	•	•	1	•	Same.
19	22	•	o	1	o	None.	1	•	•	•	1 1/2	•	No perforation. Senn's test applied.
20	22	•	3	o	o	Uterus.	6	•	•	•	1 1/2	•	Hysterectomy of pregnant tubes and uterus.
21	22	•	5	o	o	Spleen.	6	•	•	•	1	•	Death from recurring hemorrhage.
22	22	•	5	2	1	None.	8	•	•	•	1	•	Senn's test impossible from occlusion.
23	22	•	6	o	1	Spleen.	9	•	•	•	1 1/2	•	Death from undetected wound.
24	22	•	o	1	•	None.	2	•	•	•	1 1/2	•	Wound of mesocolon involving large vessel.
25	22	•	o	o	o	Spleen.	6	•	•	•	1	•	Death from hemorrhage.
26	22	•	4	o	1	Spleen.	1	•	•	•	•	•	Tissues very fragile, tearing readily.
27	22	•	8	o	1	None.	9	•	•	•	1	•	No remarks.
28	22	•	8	o	1	Spleen.	10	•	•	•	1	•	Second laparotomy for purulent peritonitis.
29	22	•	7	o	o	Spleen, Uterus.	11	•	•	•	1 1/2	•	Death from obstruction dependent upon an entero-lith.
30	22	•	3	o	o	None.	10	•	•	•	1	•	No remarks.
31	22	•	9	o	o	Spleen.	10	•	•	•	1 1/2	•	No remarks.
32	22	•	6	2	2	None.	10	•	•	•	1 1/2	•	Secondary drainage for purulent peritonitis.